

Performance Objectives of Land Disposal

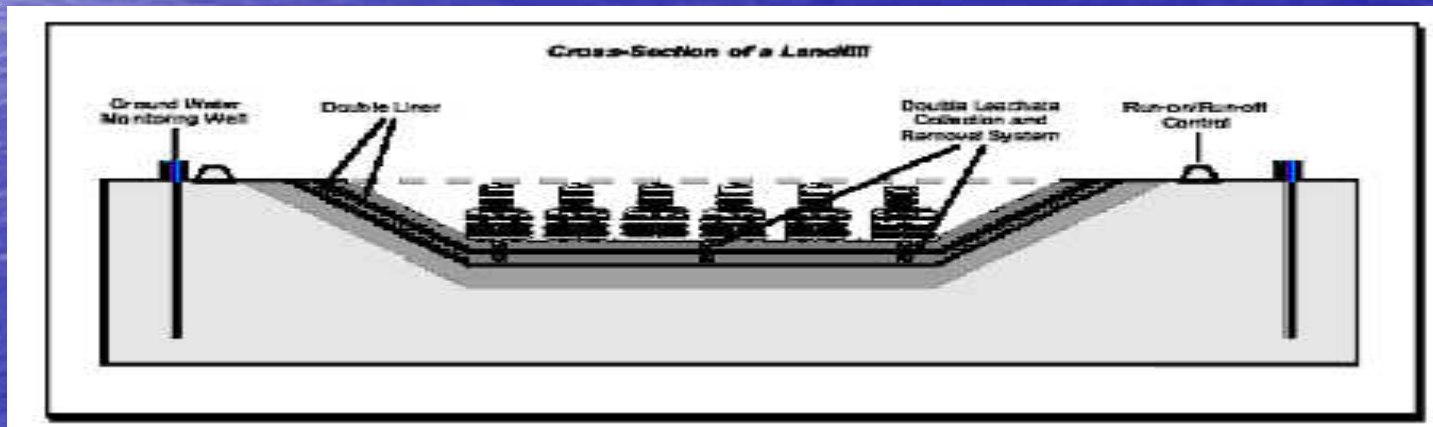
- To isolate and permanently contain waste
- To prevent releases of harmful pollutants
- To ensure current hazardous waste disposal sites do not become environmental contamination sites of the future

Land Disposal Criteria

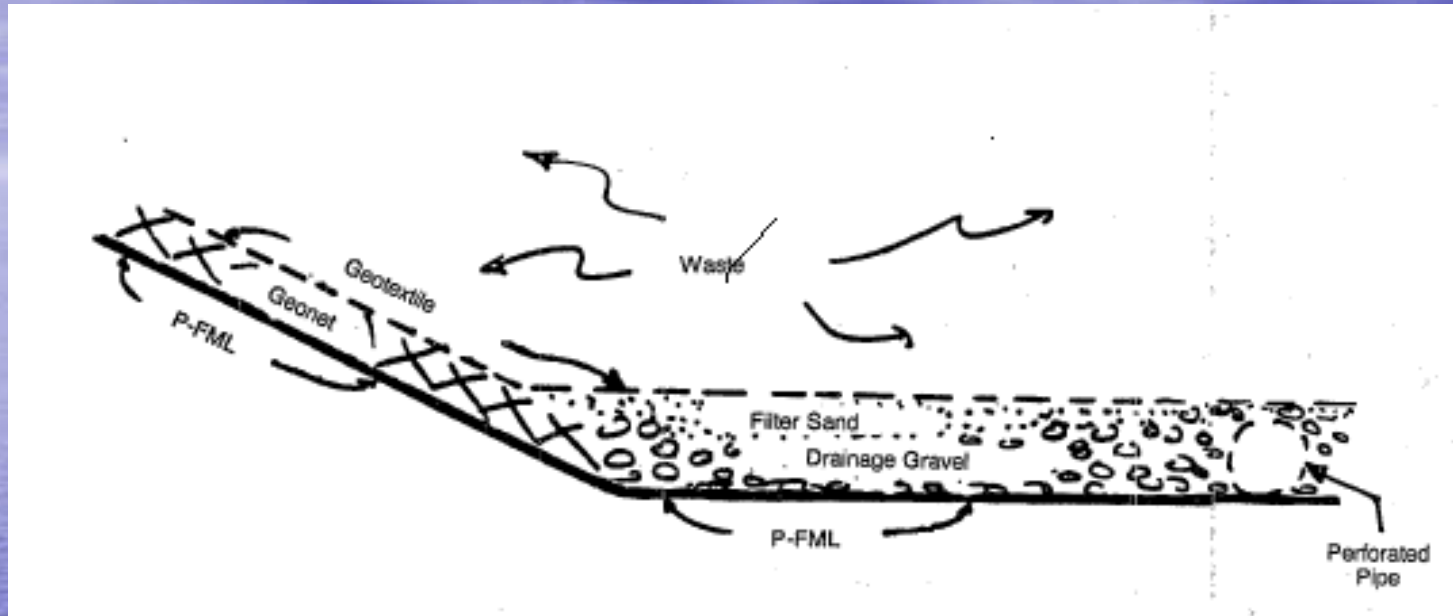
- To ensure safe disposal, governments can require:
 - Minimum Location and Design Standards
 - Construction Quality Control Standards
 - Operation and Maintenance Standards
 - Groundwater Monitoring Standards
 - Treatment of Waste Prior to Disposal
 - Closure and Post-closure Standards
 - Financial Assurance Instruments

Landfill Design Features

- Similar design to surface impoundment, with one or more liners, and groundwater monitoring
- However, leachate forms at bottom due to rain



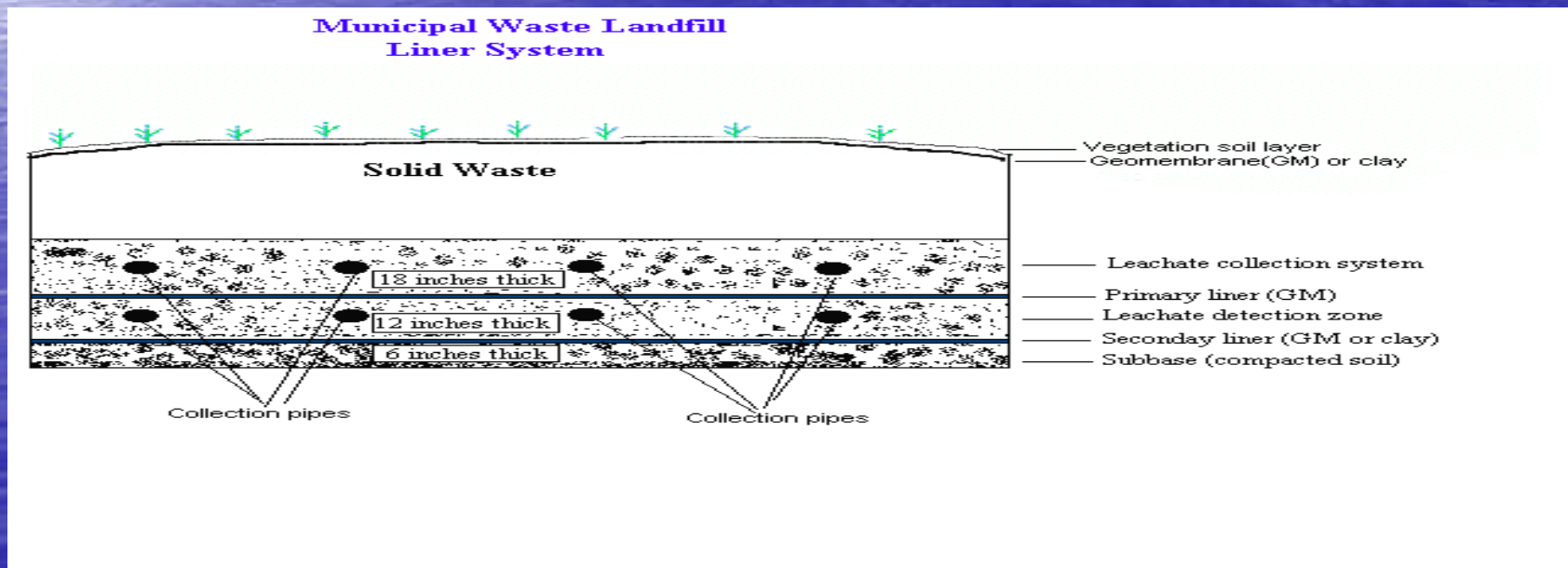
Leachate Collection



- Bottom of the landfill is sloped so that pipes laid along the bottom capture the contaminated leachate as it accumulates
- Leachate is then pumped to a leachate treatment facility

Leak Detection

- Install leak detection below the top liner and above the bottom liner
- Establish “Action Leakage Rate”



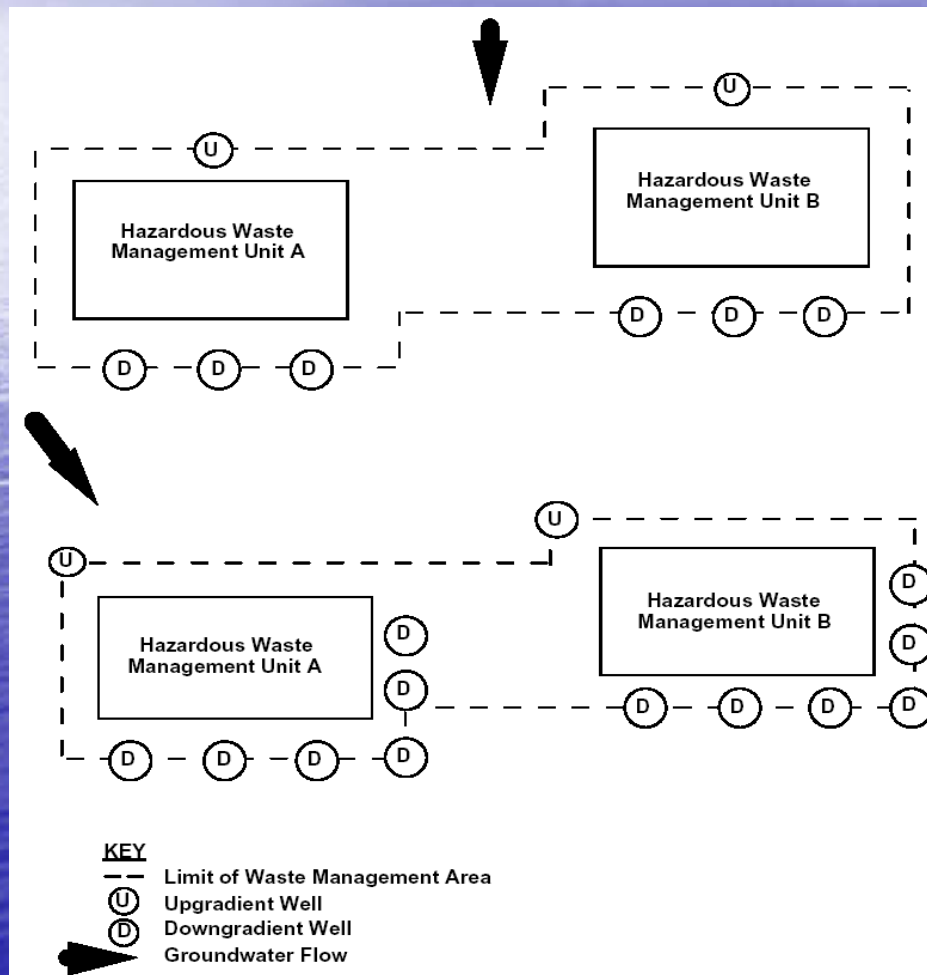
Treatment of Waste Before Disposal

- Makes Waste Less Toxic
- Makes Waste Less Mobile
- Facilitates Containment
- US Requires Treatment of All Hazardous Waste Prior to Land Disposal

Response Actions

- Ensure owners and operators are trained to handle a leak
- Require a written response action plan
- Specify both short- and long-term plans

Locating Wells



- Data from samples taken from upgradient wells are compared to the data from samples taken from downgradient wells

A Typical Landfill Cap

